U.S. Department of the Interior
Bureau of Land Management
Little Snake Field Office
455 Emerson Street
Craig, CO 81625-1129

ENVIRONMENTAL ASSESSMENT

EA-NUMBER: CO-100-2006-019 EA

CASEFILE/PROJECT NUMBER/LEASE NUMBER:

COC03689: Ace Unit Well #10
COC038749A: Musser Well #25
COC081267: Carl Allen Well #26

PROJECT NAME: Three Powderwash Wells

LEGAL DESCRIPTION: All three wells in Moffat County, Colorado

Ace Unit Well #10: NWSW Section 3, T11N, R97W, 6th PM
Musser Well #25: SWNW Section 4, T11N, R97W, 6th PM
Carl Allen Well #26: NESE Section 33, T12N, R97W, 6th PM

APPLICANT: Wexpro Company

PLAN CONFORMANCE REVIEW: The proposed action is subject to the following plan:

Name of Plans: Little Snake Resource Management Plan and Record of Decision (ROD) approved on April 26, 1989; and the Colorado Oil and Gas Leasing & Development Environmental Impact Statement (EIS) and the ROD signed on November 5, 1991.

Remarks: The proposed Three Powderwash Wells would be located within Management Unit 2 (Little Snake Resource Management Plan). One of the objectives of Management Unit 2 is to provide for the development of the oil and gas resource. The development of other resource uses/values within this unit is allowed consistent with the management objectives for oil, gas, and forest resources.

The proposed action has been reviewed for conformance with this plan (43 CFR 1610.5, BLM 1617.3). The proposed action is in conformance with the objectives for this management unit.

NEED FOR PROPOSED ACTION: To provide for the development of oil and gas resources and to supply energy resources to the American public.

PUBLIC SCOPING PROCESS: The Notices of Staking (NOSs) have been posted in the public room of the Little Snake Field Office for a 30-day public review period beginning November 16, 2005 when the NOSs were received, and may be viewed during regular business hours (7:45 a.m. to 4:30 p.m.), Monday through Friday, except holidays.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES: The proposed action is to approve three Applications for Permit to Drill (APD) submitted by Wexpro Company. Wexpro Company proposes to drill three gas wells on BLM administered land located in the Powderwash Field in T 11 & 12N, R97W. APDs have been filed with the LSFO for the Ace Unit Well #10, the Musser Well #25, and the Carl Allen Well #26. The APDs include drilling and surface use plans that cover mitigation of impacts to vegetation, soil, surface water, and other resources. Mitigation not incorporated by Wexpro Company in the drilling and surface use plans would be attached by the BLM as Conditions of Approval to an approved APD.

The proposed wells are located approximately 65 miles northwest of Craig, Colorado. Construction work is planned to start during the spring of 2006 and the estimated duration of construction and drilling for each of the wells is 30 days. Short access roads would be constructed for each well. Total surface disturbance for road construction would be approximately two (2) acres. All road construction would be on lease and on BLM surface and would not require a federal Right-of-Way.

The proposed well pad would be cleared of all vegetation and leveled for drilling. Topsoil and native vegetation would be stockpiled for use in reclamation. Approximately 3.0 acres would be disturbed for construction of each well pad. This would include the 400' by 295' well pad, the topsoil, and subsoil piles. A reserve pit would be constructed on the well pad to hold drill mud and cuttings. If a well is a producer, cut portions of the well site would be backfilled and unused portions of the well site would be stabilized and re-vegetated. If a gas well proves unproductive, it would be properly plugged and the entire well pad and access road would be reclaimed.

Wexpro Company did include plans for a gas sales pipeline with the APD. Approximately 884 feet of new pipeline would be installed and connected to existing gas pipelines in the Powderwash Field to service the wells once production is established. All pipeline construction would be on lease and on BLM surface.

NO ACTION ALTERNATIVE: The "no action" alternative is that the well would not be permitted and therefore no well would be drilled. Wexpro Company holds a valid and current oil and gas lease for the area where the proposed three Powderwash Wells would be located. Under leasing contracts, the BLM has an obligation to allow mineral development if the environmental consequences are not irreversible or too severe. The APD process is designed to overcome the no action situation of not accepting the APD through the mitigation of predicted environmental consequences. Since the proposed action is consistent with the ROD and the Oil and Gas Leasing EIS, the no action alternative will not be analyzed further in this EA.

AFFECTED ENVIRONMENT/ENVIRONMENTAL CONSEQUENCES/MITIGATION MEASURES

CRITICAL RESOURCES

AIR QUALITY

Affected Environment: There are no special designation air sheds or non-attainment areas nearby that would be affected by the proposed action.

Environmental Consequences: Short term, local impacts to air quality from dust would result during and after well pad construction. Drilling operations produce air emissions such as exhaust from diesel engines that power drilling equipment. Air pollutants could include nitrogen oxides, particulates, ozone, volatile organic compounds, fugitive natural gas, and carbon monoxide. Gas flaring reduces the health and safety risks in the vicinity of the well by burning combustible and poisonous gases like methane and hydrogen sulfide. The proposed action will not adversely affect the regional air quality.

Mitigative Measures: None

Name of specialist and date: Barb Blackstun 01/12/06

AREA OF CRITICAL ENVIRONMENTAL CONCERN

Affected Environment: Not present.

Environmental Consequences: Not applicable.

Mitigative Measures: Not applicable

Name of specialist and date: Jim McBrayer 01/25/06

CULTURAL RESOURCES

Affected Environment: Cultural resources, in this region of Colorado, range from late Paleo-Indian to Historic. For a general understanding of the cultural resources in this area of Colorado, see An Overview of Prehistoric Cultural Resources, Little Snake Resource Area, Northwestern Colorado, Bureau of Land Management Colorado, Cultural Resources Series, Number 20, An Isolated Empire, A History of Northwestern Colorado, Bureau of Land Management Colorado, Cultural Resource Series, Number 2 and Colorado Prehistory: A Context for the Northern Colorado River Basin, Colorado Council of Professional Archaeologists.

Environmental Consequences: The proposed project(s), Ace Unit 10, Musser 25, and Carl Allen 26, well pads, access roads, and pipelines, have undergone a Class III cultural resource survey:

Malson, Teresa
2006 Wexpro Company Ace Unit #10 Well Pad and Access Road Class III Cultural Resource Inventory. 05.WAS.1160; BLM 12.21.06. Western Archaeological Services, Rock Springs, Wyoming.

Malson, Teresa
2006 Wexpro Company Ace Unit #10 Well Pipeline Class III Cultural Resource Inventory. 05.WAS.1161; BLM 12.22.06. Western Archaeological Services, Rock Springs, Wyoming.

Malson, Teresa
2006 Wexpro Company Musser 25 Well Pad and Access Road Class III Cultural Resource Inventory. 05.WAS.1158; BLM 12.23.06. Western Archaeological Services, Rock Springs, Wyoming.

Malson, Teresa
2006 Questar Gas Management Musser 25 Pipeline Class III Cultural Resource Inventory. 05.WAS.1159; BLM 12.24.06. Western Archaeological Services, Rock Springs, Wyoming.

Malson, Teresa
2006 Wexpro Company Carl Allen 26 Well and Access Road Class III Cultural Resource Inventory in Moffat County, Colorado. 06-WAS-1156; BLM 12.27.06. Western Archaeological Services, Rock Springs, Wyoming.

The survey identified (no) eligible to the National Register of Historic Places prehistoric cultural resources. The proposed project may proceed as described in this EA with the following mitigative measures in place.

Mitigative Measures:

The following standard stipulations apply for this project:

1. The operator is responsible for informing all persons who are associated with the operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are encountered or uncovered during any project activities, the operator is to immediately stop activities in the immediate vicinity of the find and immediately contact the authorized officer (AO) at (970) 826-5000. Within five working days, the AO will inform the operator as to:

- Whether the materials appear eligible for the National Register of Historic Places;
- The mitigation measures the operator will likely have to undertake before the identified area can be used for project activities again; and
- Pursuant to 43 CFR 10.4(g) (Federal Register Notice, Monday, December 4, 1995, Vol. 60, No. 232) the holder of this authorization must notify the AO, by telephone at (970) 826-5000, and with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.

2. If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation costs. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

Name of specialist and date: Henry S. Keesling 02/28/06

ENVIRONMENTAL JUSTICE

Affected Environment: There will be no impact to minority or low-income populations.

Environmental Consequences: None.

Mitigative Measures: None.

Name of specialist and date: Phillis A. Bowers 01/13/06

FLOOD PLAINS

Affected Environment: Active floodplains and flood prone zones are avoided.

Environmental Consequences: No threat to human safety, life, welfare, or property will result from the proposed action.

Mitigative Measures: None

Name of specialist and date: Barb Blackstun 01/12/06

INVASIVE, NONNATIVE SPECIES

Affected Environment: Halogeton (Halogeton glomeratus) and cheatgrass (Bromus tectorum) are known to occur along roadsides, well pads and other disturbed areas. Given an opportunity, both these species are capable of out competing native vegetation communities, and becoming the dominant cover type without management. Several biennial thistles are known to occur in this area given wet enough conditions. The potential for other noxious weeds to occur exists given favorable climatic and growing conditions.

Environmental Consequences: The surface disturbing activities and associated traffic involved with drilling three new wells, installing pipelines, and upgrading and constructing new access roads will create a favorable environment, and provide a mode of transport, for invasive species and other noxious weeds to become established. Invasive species can be spread through a variety of means including vehicular travel, wind, water, and wildlife and livestock movement. Required mitigation attached as Conditions of Approval to minimize disturbance, and the utilization of interim reclamation techniques would facilitate control of invasive species and reduce the potential of long term infestation of annual and noxious weed species. All principles of Integrated Pest Management should be employed to control noxious weeds on public lands.

Mitigative Measures: None

Name of specialist and date: Curtis Bryan 01/30/06

MIGRATORY BIRDS

Affected Environment: There are no raptor nests located within a one mile radius of the proposed well sites. The general Powder Wash area provides nesting habitat for a variety of migratory birds. One species listed on USFWS's Bird of Conservation Concern List, the sage sparrow, likely nests in the area. Additional birds that may nest in the area include the vesper sparrow and sage thrasher.

Environmental Consequences: The proposed action has a low potential to result in the take of any migratory bird species. Nesting of migratory birds may be disrupted and nests could be lost if construction activities are conducted during the nesting period (May – July). As this would only impact approximately 11 acres of sagebrush habitat, the potential of take would remain low. Disturbing 11 acres of nesting habitat would not significantly impact migratory birds, however, increased fragmentation of habitat from oil and gas development may decrease the suitability of the habitat for some species. It is unlikely that this disturbance would have a measurable influence on the abundance or distribution of breeding migratory birds at a landscape level.

Mitigative Measures: None

Name of specialist and date: Desa Ausmus 01/17/06

NATIVE AMERICAN RELIGIOUS CONCERNS

A letter was sent to the Uinta and Ouray Tribal Council, Southern Ute Tribal Council, Ute Mountain Ute Tribal Council, and the Colorado Commission of Indian Affairs on January 21, 1999. The letter listed the projects that the BLM would notify them on and projects that would not require notification. No comments were received (Letter on file at the Little Snake Field Office). This project requires no additional notification.

Name of specialist and date: Henry S. Keesling 02/28/06

PRIME & UNIQUE FARMLANDS

Affected Environment: Not Present

Environmental Consequences: None

Mitigative Measures: None

Name of specialist and date: Barb Blackstun 01/12/06

T&E SPECIES – ANIMALS

Affected Environment: The project area provides general winter habitat for the bald eagle, listed as threatened under the Endangered Species Act. Bald eagles are known to winter along portions of the Little Snake and Yampa Rivers, using adjacent upland habitat as scavenging areas primarily for winter or vehicle killed mule deer and elk. Any bald eagle in the project area would be opportunistically feeding on carrion. The project area also provides habitat for the greater sage grouse, a BLM sensitive species. The area is mapped a winter habitat by the Colorado Division of Wildlife. The area does not provide nesting or brooding rearing habitat for sage grouse.

Environmental Consequences: No Federally ESA listed animal species would be affected by the proposed action. There have not been any site specific observation of eagles in the project area and the well site does not contain any critical eagle habitat such as roosting or perching sites. Bald eagles would only be in the project area if they were opportunistically feeding on carrion during the winter months. The likelihood of a bald eagle occurring at the proposed well site is low, however if a bald eagle is observed in the immediate vicinity of the project site (well pad, pipeline, and new road site), construction should be delayed until the eagle has moved out of the area. This would ensure that eagles are not disturbed or impacted by the proposed action. Although the proposed action would alter 11 acres of habitat, this would not impact bald eagle's ability to feed on carrion in upland habitats. With the above mitigation, the proposed action would have 'no effect' to bald eagles.

Impacts to grouse species from oil and gas development are discussed in the Colorado Oil and Gas EIS (1991). Impacts include, but are not limited to, displacement into less suitable habitat and loss of habitat. Other impacts, such as habitat fragmentation and the spread of exotic plants can also degrade sage grouse habitat (Connelly et al. 2004). Although the three wells are located in mapped winter range, sagebrush stands at the well sites did not meet characteristics of quality winter habitat for sage grouse. Shrub vegetation at the sites was too sparse or sagebrush patch size was too small to provide suitable winter habitat for sage grouse. The project area does provide some habitat for grouse during non-critical times of the year or when moving to and from winter or nesting habitat. Some impacts to sage grouse would still be expected from this project, mostly from indirect impacts to habitat or displacement during drilling and construction activities. The proposed wells will eliminate approximately 11 acres of sage grouse habitat. Individual well pad construction would not have significant negative impacts on sage grouse habitat, however, the cumulative impacts of three new wells, pipelines, their associated roads and the amount of gas development already existing in the area, will continue to degrade grouse habitat. Oil and gas development may lead to decreased sage grouse use of the Powder Wash area.

References:

Bureau of Land Management. 1991. Colorado Oil and Gas Leasing and Development. Final Environmental Impact Statement. U.S. Dept. of Interior.

Connelly, J.W., S.T. Knick, M.A. Schroeder and S.J. Stiver. 2004. Conservation Assessment of Greater Sage-grouse and Sagebrush Habitats. Western Association of Fish and Wildlife Agencies. Unpublished Report. Cheyenne, Wyoming.

Mitigative Measures: Bald eagle winter range – If a wintering bald eagle is observed in the immediate vicinity of the project site (well pad and new road site), construction should be delayed until the eagle has moved out of the area.

Name of specialist and date: Desa Ausmus 01/17/06

T&E SPECIES – PLANTS

Affected Environment: There are no federally listed threatened or endangered plant species within or in the vicinity of these three proposed wells.

Environmental Consequences: None

Mitigative Measures: None

Name of specialist and date: Hunter Seim 01/25/06

T&E SPECIES - SENSITIVE PLANTS

Affected Environment: There are no BLM sensitive plant species that would be affected by any of these three proposed wells. The proposed Ace Unit #10 is within one mile of a known population of Nelson milkvetch (Astragalus nelsonianus); however BLM sensitive species is not found within the proposed area of disturbance for this well.

Environmental Consequences: None

Mitigative Measures: None

Name of specialist and date: Hunter Seim 01/25/06

WASTES, HAZARDOUS OR SOLID

Affected Environment: If a release does occur, the environment affected would be dependent on the nature and volume of material released. If there are no releases, there will be no impact on the environment.

Environmental Consequences: Consequences will be dependent on the volume and nature of the material released. In most every situation involving hazardous materials, there are ways to remediate the area that has been contaminated. Short-term consequences will occur, but they can be remedied, and long-term impacts will be minimal.

Mitigative Measures: None

Name of specialist and date: Duane Johnson 01/12/06

WATER QUALITY – GROUND

Affected Environment: Fresh water within the Wasatch Formation may occur. Water within the Wasatch Formation in existing wells within T.12N., R.100W., sections 22 and 23 ranges from 1,402 ppm TDS to 30,599 ppm TDS. Potable water is highly unlikely in this area. The surface casing will be adequate to protect any fresh water zones, coupled with production casing and cement behind pipe from TD to surface.

Environmental Consequences: With the use of proper construction practices, drilling practices, and with best management practices no significant adverse impact to groundwater aquifers and quality is anticipated to result from the proposed action. A geologic and engineering review was performed on the 8-point drilling plans to ensure that the cementing and casing programs adequately protect the downhole resources.

Mitigative Measures: None

Name of specialist and date: Fred Conrath 01/31/06

WATER QUALITY/HYDROLOGY – SURFACE

Affected Environment: The proposed three Powder Wash wells would be constructed near Ace in the Hole Draw, an ephemeral drainage. Any runoff from the well pads, pipelines, or access roads would drain towards the Ace in the Hole Draw, which drains into Powder Wash. All stream segments near the well pad location are presently supporting classified beneficial uses. No impaired stream segments occur in the vicinity of the proposed action.

Environmental Consequences: Runoff water from the well site would drain towards Powder Wash, which is an ephemeral tributary to the Little Snake River. Increased sedimentation to Powder Wash during spring runoff or from high intensity rainstorms is the most likely environmental consequence from the proposed action. Although some sediment may be transported off site and eventually reach perennial waters, the mitigation provided in the Surface Use Plan and the Conditions of Approval will reduce the potential impacts caused by surface runoff.

Mitigative Measures: None

Name of specialist and date: Barb Blackstun 01/25/06

WETLANDS/RIPARIAN ZONES

Affected Environment: No riparian habitat exists in the project area.

Environmental Consequences: None

Mitigative Measures: None

Name of specialist and date: Desa Ausmus 01/17/06

WILD & SCENIC RIVERS

Affected Environment: Not present.

Environmental Consequences: Not applicable.

Mitigative Measures: Not applicable

Name of specialist and date: Jim McBrayer 01/25/06

WILDERNESS, WSAs

Affected Environment: Not present.

Environmental Consequences: Not applicable.

Mitigative Measures: Not applicable

Name of specialist and date: Jim McBrayer 01/25/06

NON-CRITICAL ELEMENTS

FLUID MINERALS

Affected Environment: All three proposed wells are in favorability zone 4 (highest for oil and gas potential). These wells will penetrate the Wasatch and Fort Union Formations. Bituminous coal seams with more than three thousand feet of overburden can be found in the lower Ft. Union Formation. Shallower thin beds of bituminous coal can be found in the Wasatch Formation as well. There mineable value is low, but they may be valuable coal bed methane reservoirs and must be protected or isolated where encountered. It should be noted that the hydrology for coal bed methane production within the Sand Wash geologic basin is unfavorable even though the gas resource is large (Scott, et al., 1995).

Environmental Consequences: The proposed casing and cementing programs appear to be adequate to protect and/or isolate all resources identified above with casing and cement behind pipe from TD to the surface.

Mitigative Measures: None

Name of specialist and date: Fred Conrath 01/31/06

PALEONTOLOGY

Affected Environment: The geologic formation at the surface is the Tertiary Age formation, Wasatch Formation, Cathedral Bluffs Tongue (Twc), a variegated claystone, mudstone and sandstone formation. This formation has been classified a Class II formation for the potential for occurrence of scientifically significant fossils.

Environmental Consequences: Scientifically significant fossils are occasionally found within this formation (Armstrong & Wolney, 1989). The potential for discovery of significant fossils on this location is considered to be moderate. If any such fossils are located here, construction activities could damage the fossils and the information that could have been gained from them would be lost. The significance of this impact would depend upon the significance of the fossil. Ceasing operations and notifying the Field Office Manager immediately upon discovery of a fossil during construction activities can effectively mitigate this impact. An assessment of the significance is made and a plan to retrieve the fossil or the information from the fossil is developed.

The proposed action could also constitute a beneficial impact to paleontological resources by increasing the chances for discovery of scientifically significant fossils.

Mitigative Measures: "Standard Discovery Stip", i.e., “If fossils are discovered during construction or other operations, all activity in the area will cease and the Field Office Manager will be notified immediately. An assessment of significance will be made within an agreed time frame. Operations will resume only upon written notification by the Authorized Officer."

References

Armstrong, Harley J. and Wolney, David G., 1989, Paleontological Resources of Northwest Colorado: A Regional Analysis, Museum of Western Colorado, Grand Junction, CO, prepared for Bur. Land Management, Vol. I of V.

Miller, A.E., 1977, Geology of Moffat County, Colorado, Colo. Geol. Surv. Map Series 3, 1:126,720.

Name of specialist and date: Robert Ernst 01/13/06

RANGE MANAGEMENT

Affected Environment: The proposed wells, pipelines, and associated road construction would take place in the Nipple Rim Allotment #04213 and the Powder Wash Allotment #04214. These allotments are permitted to Smith Rancho (#04213), Morgan Creek Land and Livestock (#04213), and Salisbury Ranch (#04214) respectively. The Nipple Rim Allotment is run in common with Smith Rancho and Morgan Creek Land and Livestock. Smith Rancho and Morgan Creek Land and Livestock are each permitted for 1989 AUM’s of sheep use from October 20 to May 20. The Powder Wash allotment is permitted for 235 AUM’s of cattle use from January 18 to March 31, and 1090 AUM’s of sheep use from November 27 to February 28.

Environmental Consequences: The proposed wells, pipelines, and associated road construction would remove approximately 11 acres of total vegetation, and consequently AUM’s as a direct impact. The increase in vehicle traffic and human activities in this area, as a result of road construction, well drilling, pipeline installation, and maintenance may displace livestock from the immediate area. As a result of this displacement livestock pressure may be higher in other areas of these allotments. If utilization monitoring and use pattern mapping indicate that livestock are exhibiting an unacceptable level of utilization in other parts of these allotments due to displacement, permitted AUMs on these allotments may need to be reduced. Both these allotments are used as winter grazing allotments and thus distribution is not expected to have a significant impact as a result of snow. It is not anticipated that the proposed action will have a significant impact on livestock management.

Mitigation Measures: None

Name of specialist and date: Curtis Bryan 01/30/06

SOILS

Affected Environment: The proposed Carl Allen #26 and the Musser #25 wells would be located within the Tresano-Hiatha-Kandaly association loam soil-mapping unit. These very deep soils are well drained and found on hills, toe slopes, and alluvial fans. Slopes within this unit average 2 to 20 percent. Theses soils formed in alluvium derived from sandstone and shale. Runoff is rapid and the hazard of wind and water erosion is moderate to high.

The proposed Ace Unit Well #10 would be located within the Talamantes loam soil-mapping unit. This very deep, well-drained soil is found on alluvial fans and toe slopes. Slopes within this unit average 0 to 6 percent. This soil formed in alluvium derived from sedimentary rocks. Runoff is slow and the hazard of wind and water erosion is moderate.

Environmental Consequences: The construction and operation of the three Powderwash Wells would affect soils within and immediately adjacent to the proposed areas of disturbance. Increased soil erosion from wind and water would occur during construction of the well pads, pipelines, and access roads. Erosion would continue throughout the operational life of the wells. Loss of topsoil, soil compaction, and possible increases in sediment loads to drainages are impacts most likely to occur.

Vegetation and soil would be removed from approximately eleven acres of land. Soil productivity would decline due to reduced soil microbial activity, impaired water infiltration, mixing of soil horizons, top soil loss, and introduction of weeds. Soil loss from construction would be greatest shortly after project start and would decrease in time as a result of stabilization through revegetation and reclamation of disturbed areas. Soil erosion would be reduced to an acceptable level with the mitigation described in the Surface Use Plan and Conditions of Approval in the approved APD. This mitigation will reduce the potential to have excessive sediments and salts in runoff water from the well sites.

Mitigative Measures: Additional mitigative measures will be employed to prevent or reduce accelerated erosion if it begins to occur within or on constructed drainage and diversion ditches or surface drainages affected by the roads or well pads.

Name of specialist and date: Barb Blackstun 03/01/06

VEGETATION

Affected Environment: The proposed action is located in a sagebrush-grass community. Dominant plant species for this site include Wyoming big sagebrush (Artemesia tridentata wyomingensis), western wheatgrass (Agropyron smithii), needle and thread (Stipa comata),

Indian ricegrass (Oryzopsis hymenoides), Galleta (Hilaria jamesii), prairie junegrass (Koeleria cristata), and sandberg bluegrass (Poa secunda).

Environmental Consequences: The Proposed Action would remove approximately 11 total acres of vegetation for well pad construction and road enhancements. The construction of the well pads would remove approximately 9 acres of previously undisturbed vegetation. The total disturbance caused by road improvements and well pad construction is minimal, and would not jeopardize the greater herbaceous community, as long as appropriate weed management practices are employed. Appropriate weed management practices are critical to the integrity of the surrounding plant community.

Mitigative Measures: None

Name of specialist and date: Curtis Bryan 01/30/06

WILDLIFE, AQUATIC

Affected Environment: The proposed action is located in a sagebrush/grass community and does not provide habitat for aquatic wildlife.

Environmental Consequences: None

Mitigative Measures: None

Name of specialist and date: Desa Ausmus 01/17/06

WILDLIFE, TERRESTRIAL

Affected Environment: The proposed well site provides habitat for mule deer and antelope. No critical habitat or severe winter range is located in the project area for either species, however, both species use the area during moderate winters. The project area also provides habitat for small mammals, birds, and reptiles.

Environmental Consequences: Impacts to wildlife species from oil and gas development are discussed in the Colorado Oil and Gas EIS (1991). Impacts include, but are not limited to, displacement into less suitable habitat, increased stress, and loss of habitat. These impacts are more significant during critical seasons, such as winter or reproduction. The proposed action is located in marginal habitat for most species, and therefore, it is unlikely the project would have significant impacts to wildlife species. All wildlife species using the area are likely to be displaced during construction and drilling activities and may find the project area less suitable once construction is complete.

Most small mammals using the project area would be capable of avoiding construction equipment and should not be directly harmed by these activities. Some burrowing animals

may be killed by construction equipment. This should be considered a short-term negative impact that is not likely to harm populations of any species.

Mitigative Measures: None

Name of specialist and date: Desa Ausmus 01/17/06

OTHER NON-CRITICAL ELEMENTS: For the following elements, those brought forward for analysis will be formatted as shown above.

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Fluid Minerals			See Fluid Minerals
Forest Management		MME 01/31/06	
Hydrology/Ground		FC 01/31/06	
Hydrology/Surface		BB 01/25/06	
Paleontology			See Paleontology
Range Management			See Range Mgmt
Realty Authorizations		PB 01/13/06	
Recreation/Travel Mgmt		RS 01/30/06	
Socio-Economics		PB 01/13/06	
Solid Minerals		RE 01/13/06	
Visual Resources		JM 01/25/06	
Wild Horse & Burro Mgmt	VMD 12/27/05		

CUMULATIVE IMPACTS SUMMARY: Cumulative impacts may result from the development of the three Powder Wash Wells when added to non-project impacts that result from past, present, and reasonably foreseeable future actions. The potential exists for future oil and gas development throughout the Powder Wash Field. Currently numerous producing wells exist within a one-mile radius of the proposed wells. Other past or existing actions near the project area that have influence on the landscape are wildfire, recreation, hunting, grazing, and ranching activities.

Surface disturbance associated with oil and gas activity would increase the potential for erosion and sedimentation. Displacement of hunters and recreationists during the short-term construction and drilling periods would occur. Contrasts in line, form, color, and texture from development would impact the visual qualities on the landscape.

Cumulative impacts to the plant communities within the gas lease and adjacent areas include an incremental reduction of continuity in the plant communities in terms of acreages that remain undisturbed. Loss of continuity results in smaller and smaller areas of undisturbed native vegetation and the potential for loss of integrity within the larger plant community. Fragmented plant communities can lose resilience to natural and man-made disturbance due to isolation of

areas from seed sources necessary for proper age class distribution of plants, and subsequently, a greater opportunity for stressors such as drought to have a more severe impact on the plant community as a whole. The increased disturbance also makes native plant communities more susceptible to invasion by annual weeds as vectors for increasing weeds. Even with weed control measures applied, the potential for weeds to move further into undisturbed remnant areas increases as these remnants become smaller and more isolated from larger undisturbed areas.

Cumulative impacts to the livestock grazing operations in the area are also increased through the Proposed Action. The grazing allotment in which these wells are proposed is primarily a winter sheep allotment. The growth in wells, roads, and human activity has reduced the availability of forage in this area far beyond direct impacts caused by construction. Halogeton which has increased among the new roads and well pads is toxic to sheep. The resulting impact to grazing activities permitted in the area is a loss of available Animal Unit Months (AUMs), i.e. a loss of the amount of livestock that the allotment can reasonably carry. Due to recent years of drought, the livestock operator has only lightly used this allotment, so direct impacts to grazing activities have not been fully felt.

Habitat fragmentation from well pad construction and the associated roads have likely decreased the nesting suitability for migratory birds in Powder Wash. Ingelfinger (2001) found that roads associated with oil and gas development have a negative impact on passerines bird species. Bird densities were reduced within 100m of each road. Due to the amount of new road construction and an increase in traffic on these roads, passerine populations in the area are likely decreasing.

The cumulative impacts of additional wells and roads in the Powder Wash field will continue to degrade habitat for the greater sage grouse. Fragmentation, mostly due to road construction, is an important factor contributing to a decrease in habitat quality. Disturbances such as higher traffic volume and other human activities also contribute to degradation of habitat quality. However, as the area is not used for nesting, brood rearing, or wintering, these impacts would be less severe. Continued oil and gas development would lead to decreased sage grouse use of the habitat.

Although big game species are able to adapt to disturbances better than other wildlife, increased development would still have impacts to mule deer and antelope. Timing stipulations adequately protect big game species during critical times of the year; however, continued oil and gas development would lead to decreased use of the habitat due to increased human activity. A significant amount of vehicle traffic occurs with oil and gas development. Impacts to big game may be vehicle-animal collisions, as these are a major cause of mortality for big game species.

References:

Ingelfinger, F. 2001. The Effects of Natural Gas Development on Sagebrush Steppe Passerines in Sublette County, Wyoming. University of Wyoming, Laramie, WY.

STANDARDS:

PLANT AND ANIMAL COMMUNITY (animal) STANDARD: The project area provides habitat for a variety of wildlife species. The proposed action would increase fragmentation of sagebrush stands, degrading wildlife habitat. The proposed action would not meet this standard within a one mile radius of the proposed action due to the amount of oil and gas development in the area. However, the proposed action would not preclude this standard from being met on a landscape level.

Name of specialist and date: Desa Ausmus 01/17/06

SPECIAL STATUS, THREATENED AND ENDANGERED SPECIES (animal) STANDARD: The project area provides habitat for two special status species, bald eagles, and greater sage grouse. The proposed action is not expected to impact bald eagles. The proposed action would increase fragmentation of sagebrush stands, degrading sage grouse habitat. The proposed action would not meet this standard within a one mile radius of the proposed action due to the amount of oil and gas development in the area. However, the proposed action would not preclude this standard from being met on a landscape level.

Name of specialist and date: Desa Ausmus 01/17/06

PLANT AND ANIMAL COMMUNITY (plant) STANDARD: The plant communities impacted by the Proposed Action are currently meeting this standard. Plant diversity, vigor, abundance, and reproductive capability are currently at levels that ensure resilience in the plant community to human activities. Weeds, particularly halogeton, must be addressed and all principles of invasive weeds control should be employed. Given this mitigation measure, the Proposed Action would meet this standard. The No Action Alternative would also meet this standard because the disturbances would not occur.

Name of specialist and date: Curtis Bryan 01/30/06

SPECIAL STATUS, THREATENED AND ENDANGERED SPECIES (plant) STANDARD: There are no federally listed threatened or endangered or BLM sensitive plant species that would be affected by any of the three proposed wells. The known population of Nelson milkvetch that is present near the Ace Unit #10 would not be affected. This standard does not apply.

Name of specialist and date: Hunter Seim 01/25/06

RIPARIAN SYSTEMS STANDARD: The riparian standard for healthy public lands will not be affected by the proposed action.

Name of specialist and date: Desa Ausmus 01/17/06

WATER QUALITY STANDARD: The proposed action would meet the public land health standard for water quality. Reclamation of the pipeline corridors would be completed immediately after installation to minimize sheet and rill erosion from the corridor. Interim reclamation of the unused area on the well pads will be completed to minimize sheet and rill erosion from the well sites. When the well pads are no longer needed for production operations, the disturbed well pads and access roads would be reclaimed to approximate original contours, topsoil would be redistributed, and adapted plant species would be reseeded. These Best Management Practices would help to reduce accelerated erosion of the site. No stream segments near this project are listed as impaired.

Name of specialist and date: Barb Blackstun 01/12/06

UPLAND SOILS STANDARD: The proposed action will not meet the upland soil standard for land health, but it is not expected to while the well locations, pipelines, and access roads are used for operations. The well pad sites, pipeline corridors, and access roads will not exhibit the characteristics of a healthy soil. Several Best Management Practices have been designed into the project or are attached as mitigating measures that will reduce impacts to and conserve soil materials. Upland soil health will return to the well pad, pipeline corridor, and access road disturbances after reclamation practices and well abandonments have been successfully achieved.

Name of specialist and date: Barb Blackstun 01/12/06

PERSONS/AGENCIES CONSULTED: Uintah and Ouray Tribal Council, Colorado Native American Commission, Colorado State Historic Preservation Office.

FINDING OF NO SIGNIFICANT IMPACT (FONSI)
EA CO-100-2006-019

Based on the analysis of potential environmental impacts contained in the EA and all other available information, I have determined that the proposal and the alternatives analyzed do not constitute a major Federal action that would adversely impact the quality of the human environment. Therefore, an EIS is unnecessary and will not be prepared. This determination is based on the following factors:

1. Beneficial, adverse, direct, indirect, and cumulative environmental impacts have been disclosed in the EA. Analysis indicated no significant impacts on society as a whole, the affected region, the affected interests, or the locality. The physical and biological effects are limited to the Little Snake Resource Area and adjacent land.

2. Public health and safety would not be adversely impacted. There are no known or anticipated concerns with project waste or hazardous materials.

3. There would be no adverse impacts to regional or local air quality, prime or unique farmlands, known paleontological resources on public land within the area, wetlands, floodplain, areas with unique characteristics, ecologically critical areas, or designated Areas of Critical Environmental Concern.

4. There are no highly controversial effects on the environment.

5. There are no effects that are highly uncertain or involve unique or unknown risk. Sufficient information on risk is available based on information in the EA and other past actions of a similar nature.

6. This alternative does not set a precedent for other actions that may be implemented in the future to meet the goals and objectives of adopted Federal, State, or local natural resource related plans, policies, or programs.

7. No cumulative impacts related to other actions that would have a significant adverse impact were identified or are anticipated.

8. Based on previous and ongoing cultural surveys, and through mitigation by avoidance, no adverse impacts to cultural resources were identified or anticipated. There are no known American Indian religious concerns or persons or groups who might be disproportionately and adversely affected as anticipated by the Environmental Justice Policy.

9. No adverse impacts to any threatened or endangered species or their habitat that was determined to be critical under the Endangered Species Act were identified. If, at a future time, there could be the potential for adverse impacts, treatments would be modified or mitigated not to have an adverse effect or new analysis would be conducted.

10. This alternative is in compliance with relevant Federal, State, and local laws, regulations, and requirements for the protection of the environment.

DECISION AND RATIONALE:
I have determined that approving these three APDs is in conformance with the approved land use plan. It is my decision to implement the project with the mitigation measures provided in the Application for Permit to Drill and the Conditions of Approval. The project will be monitored as stated in the Compliance Plan outlined below.

MITIGATION MEASURES: The mitigation measures for this project are found in the file room of the Little Snake Field Office. The APD's 13-point surface use plan, well location maps, and the Conditions of Approval are found in the well's case file labeled COC03689, Well #10; COC038749A, Well #25; and COC081267, Well #26.

COMPLIANCE PLAN(S):

Compliance Schedule
Compliance will be conducted during the construction phase and drilling phase to insure that all terms and conditions specified in the lease and the approved APD are followed. In the event a producing well is established, periodic inspections as identified through the Inspection and Enforcement Strategy and independent well observations will be conducted. File inspections will include a review of all required reports and the Monthly Report of Operations will be evaluated for accuracy.

Monitoring Plan
The well location and access road will be monitored during the term of the lease for compliance with pertinent Regulations, Onshore Orders, Notices to Lessees, or subsequent COAs until final abandonment is granted; monitoring will help determine the effectiveness of mitigation and document the need for additional mitigative measures.

Assignment of Responsibility
Responsibility for implementation of the compliance schedule and monitoring plan will be assigned to the Fluid Mineral staff in the Little Snake Field Office. The primary inspector will be the Petroleum Engineering Technician, but the Petroleum Engineer, Natural Resource Specialist, Realty Specialist, and Legal Instruments Examiner will also be involved.

DATE SIGNED: 03/10/06